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SECONDARY DEETHANIZER TO DEBOT-TLENECK AN ETHYLENE PLANT

Abstract

A process for deethanizing light hydrocarbons comprising olefins is disclosed. A feed stream, comprising ethylene, ethane, propylene, and propane, is supplied to a primary deethanizer 24, having absorption and stripping sections. The absorption section produces an overhead vapor effluent 128, consisting primarily of ethylene and ethane, which is supplied to a C2 splitter to separate ethane and ethylene. The stripping section produces a primary deethanizer bottoms stream having an ethane concentration from 1 to 20 mole percent of the feed ethane. The primary deethanizer bottoms 120 are cooled and supplied to a secondary deethanizer 142 having absorption and stripping sections. The absorption section is refluxed, producing an overhead effluent 154 essentially free of ethylene. The stripping section is refluxed to produce a secondary deethanizer bottoms stream essentially free of ethane. The secondary deethanizer bottoms stream is supplied to a depropanizer or C3 splitter for separation of the remaining olefins.